

Title (en)

HERMETICALLY SEALED ELECTRICAL FEEDTHROUGH FOR USE WITH IMPLANTABLE ELECTRONIC DEVICES

Title (de)

HERMETISCH VERSIEGELTE ELEKTRISCHE DURCHFUHR DIE BEI IMPLANTIERBAREN ELEKTRONISCHEN VORRICHTUNGEN ANGEWENDET WERDEN KANN

Title (fr)

TROU D'INTERCONNEXION ELECTRIQUE, SCELLE HERMETIQUEMENT, PREVU POUR ETRE UTILISE DANS DES DISPOSITIFS ELECTRONIQUES IMPLANTABLES

Publication

EP 0844899 A1 19980603 (EN)

Application

EP 96928169 A 19960814

Priority

- US 9613170 W 19960814
- US 51555995 A 19950816

Abstract (en)

[origin: WO9706853A1] A thin hermetically sealed electrical feedthrough (30) suitable for implantation within living tissue permits electrical connection between electronic circuits (50) sealed within a hermetically sealed case (10) and electrical terminals (36, 36') or contacts on the outside of the case. The hermetically sealed case (10) is made by hermetically bonding a cover (40) to a first insulating layer (22). The hermetically sealed electrical feedthrough is made by depositing a conductive trace (32) on a second insulating layer (26) and then depositing the first insulating layer (22) thereover, so that the conductive trace is hermetically encapsulated within the insulating layers. At least two spaced-apart openings are formed in the insulating layers before bonding the cover thereto, exposing the conductive trace. Additional conductive material is then inserted within each of the openings or holes so as to form conductive vias (35, 36) that make electrical contact with the conductive trace (32). The cover is then hermetically sealed to the first insulating layer (22) so that at least one conductive via (35) resides inside of a hermetically sealed cavity (42) formed under the cover, and the other conductive via (36) resides outside of the hermetically sealed cavity. An electrical feedthrough (32) is thus formed through the respective conductive vias (35, 36) and conductive trace (32) so that electrical contact may be made between the outside and inside of the hermetically sealed cavity (42).

IPC 1-7

A61N 1/375; **H01L 23/057**; **H05K 5/00**

IPC 8 full level

A61N 1/375 (2006.01); **H01L 23/057** (2006.01); **H05K 5/00** (2006.01); **H05K 1/03** (2006.01); **H05K 3/28** (2006.01); **H05K 3/40** (2006.01)

CPC (source: EP US)

A61N 1/3754 (2013.01 - EP US); **H01L 23/057** (2013.01 - EP US); **H05K 5/0095** (2013.01 - EP US); **H01L 2224/16** (2013.01 - EP US); **H01L 2924/01078** (2013.01 - EP US); **H01L 2924/01079** (2013.01 - EP US); **H01L 2924/09701** (2013.01 - EP US); **H01L 2924/10253** (2013.01 - EP US); **H01L 2924/16152** (2013.01 - EP US); **H05K 1/0306** (2013.01 - EP US); **H05K 3/28** (2013.01 - EP US); **H05K 3/4007** (2013.01 - EP US)

Citation (search report)

See references of WO 9706853A1

Cited by

FR3041209A1; CN108029209A; CN113068333A; US10420218B2; US7236834B2; US11446503B2; US8386047B2; WO2017046269A1; US7254443B2; US8552311B2; US7103408B2; US7132173B2; US10424345B1; US10594100B1; US10629244B1; WO2020007736A1; US10395694B1; US10515668B2; US9490620B1; US9736940B2

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DOCDB simple family (application)

US 9613170 W 19960814; AU 6774396 A 19960814; CA 2229596 A 19960814; DE 69629305 T 19960814; EP 96928169 A 19960814; ES 96928169 T 19960814; US 51555995 A 19950816